

S/N 10/751,091

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	MOECKLY	Examiner:	P. WARTALOWICZ
Serial No.:	10/751,091	Group Art Unit:	1793
Filed:	JANUARY 2, 2004	Docket No.:	10467.43US12
Title:	HIGH-TEMPERATURE SUPERCONDUCTOR DEVICES AND METHODS OF FORMING THE SAME		

Electronically filed on May 1, 2009.

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In response to the Notice of Non-Compliant Appeal Brief mailed on April 23, 2009, Applicants respectfully submit the attached sheet to replace page 16 of the Appellant's Brief on Appeal filed on March 23, 2009.

On the attached replacement sheet, the markings Applicants believe were objected to have been deleted.

Applicant respectfully request the acceptance of the correction to the Appeal Brief and submit that as corrected, the Appeal Brief complies with 37 C.F.R. § 41.37.

Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

23552

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Date: May 1, 2009

CLAIMS APPENDIX

65. A Josephson junction device, comprising:

- a first layer comprising an oxide high-temperature superconductor;
- a second layer comprising an oxide high-temperature superconductor; and
- a third layer connecting the first and second layers and comprising a non-superconductor, the first and third layers being formed from a starting oxide high-temperature superconductor layer of an oxide high-temperature superconductor, the third layer being an ion-modified portion of the starting oxide high-temperature superconductor layer, the first layer being an unmodified portion of the starting oxide high-temperature superconductor layer,

the device having an R_nA value of about 1×10^{-9} to about $3 \times 10^{-7} \Omega\text{-cm}^2$ at 4.2 K.

66. The Josephson junction device of claim 65, wherein the first layer comprises an YBCO superconducting oxide.

67. An electronic device comprising:

- a crystalline substrate;
- an electrode formed on and epitaxial to the substrate, the electrode comprising a first superconductive oxide;
- a barrier comprising a non-superconducting, ion-modified surface layer of the first superconductive oxide; and
- a counter-electrode formed directly on and epitaxial to the barrier, the counter-electrode comprising a second superconductive oxide, whereby a Josephson junction is formed between the electrode and the counter-electrode, having an R_nA value of about 1×10^{-9} to about $3 \times 10^{-7} \Omega\text{-cm}^2$ at 4.2 K.

68. The device of claim 67, wherein the first and second superconductive oxides are YBCO.

71. A Josephson junction device, comprising:

- a first layer comprising an oxide high-temperature superconductor;